Disaster Prevention

Escape Route

Route System

transportation

Underwater Station

"Ark No.33" connects the surface of the resort island and the submarine station. At the same time, its transportation network covers the entire island, allowing people to enjoy the unique elegance of Ark No. 33.
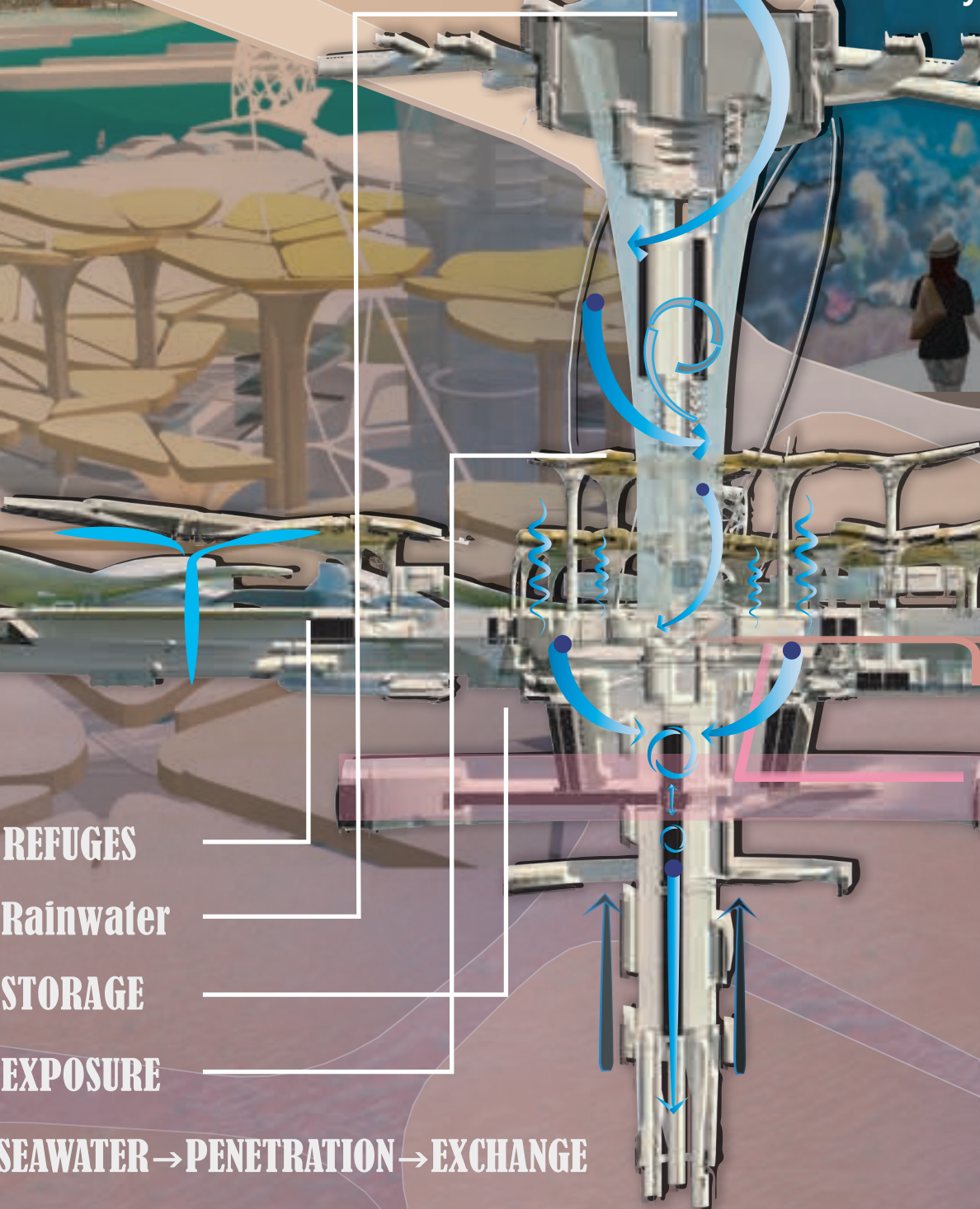
Concept

Developed with the image of a new type of resort island, Future Ark, as the 33rd outlying island of Phuket, aims to eliminate the problem of sea level rising and pollution in Phuket. The Voronoi diagram serves as the foundation of the island and visualizes the coral structure. It plans the traffic, solving the garbage problem and public safety issues.

In addition, the AI system is applied to water circulation systems, garbage collection and classification systems. Freely combined residential units create new ways of interaction. In other words, it provides passengers with flexible social distance and housing right in the epidemic era.

New Type Resort Island No.33

"New type resort island", the 33rd island of Phuket, eliminates the threat of ocean pollution and sea level rising effectively. Residential units can be combined freely while ensuring tourism economy and social distance. The escape route on the seabed connects all the spaces on the island to ensure disaster responsibilities, vacation quality and public safety. In addition, the AI system controls the water circulation system and garbage collection system to reduce the impact on Phuket's marine ecology.

Entertainment

AR Aquarium

Being the main entertainment facility on Ark No.33, the curved surface of the aquarium is designed in the form of waves to blur the boundary between the island and the sea. AR technology presents the marine ecosystem of Phuket, and visitors can use the information integration system to learn about marine ecology.
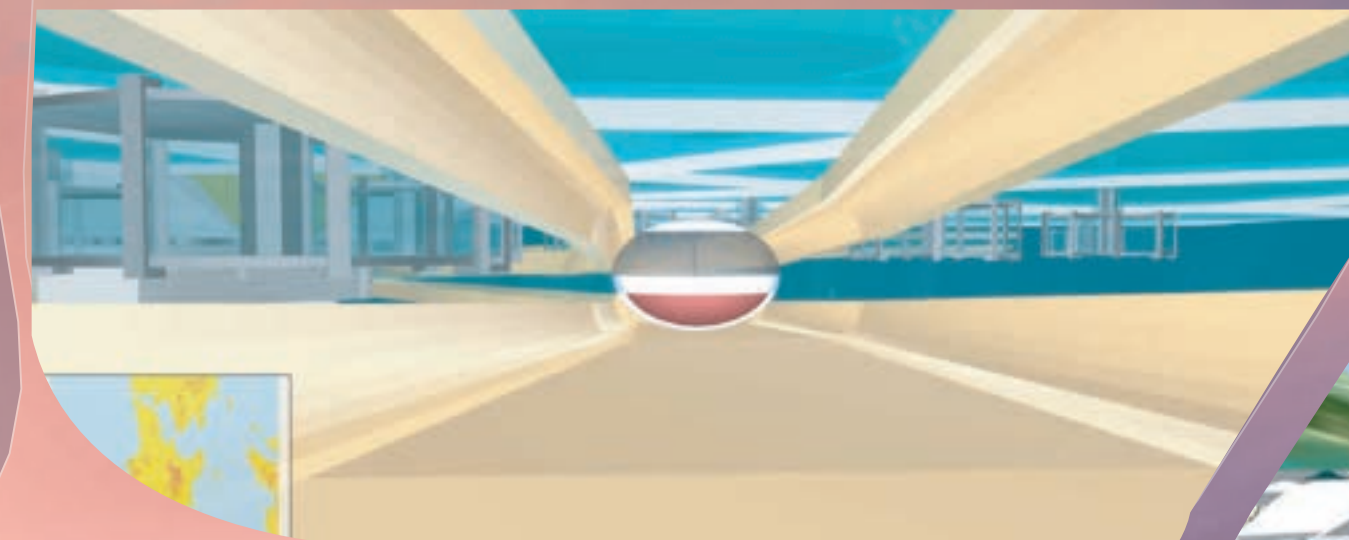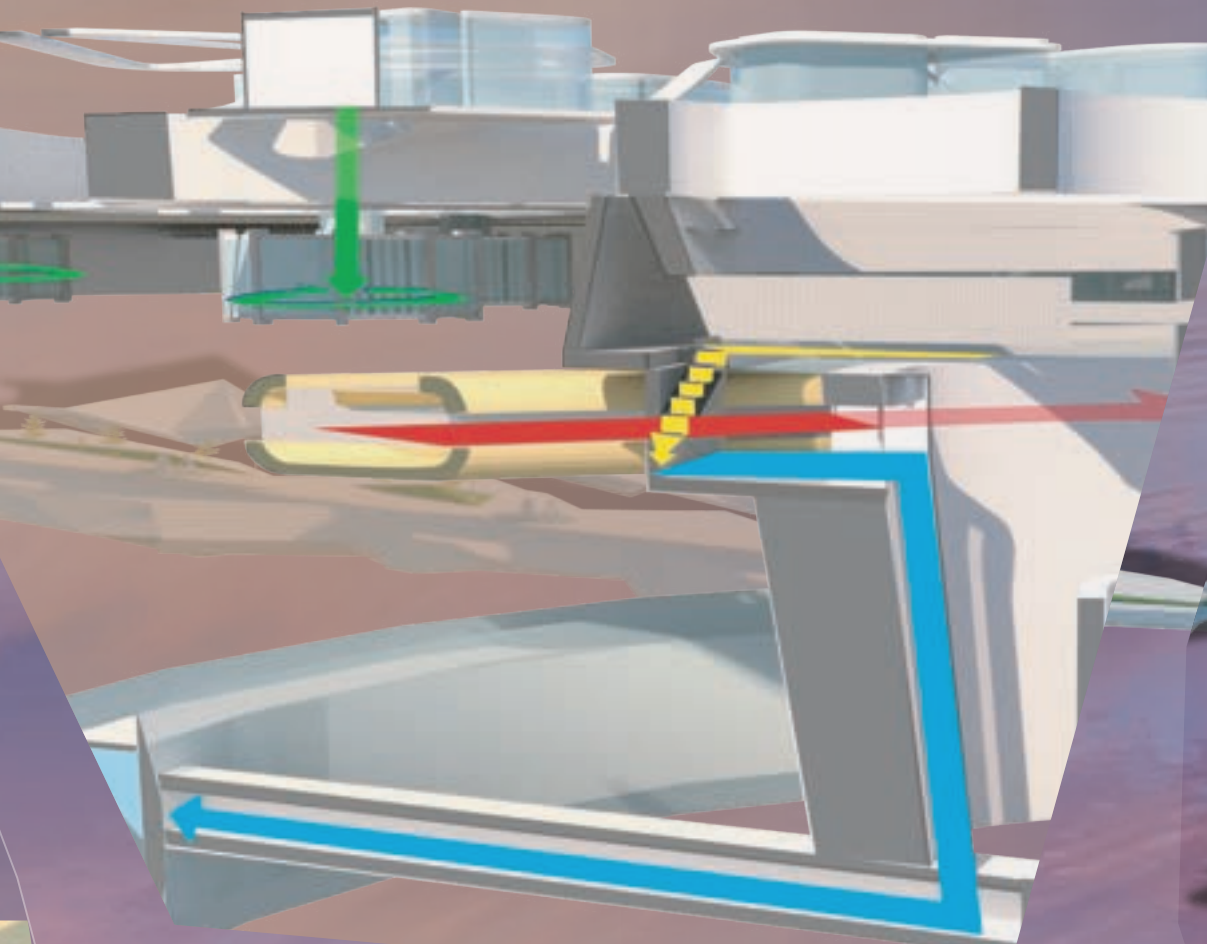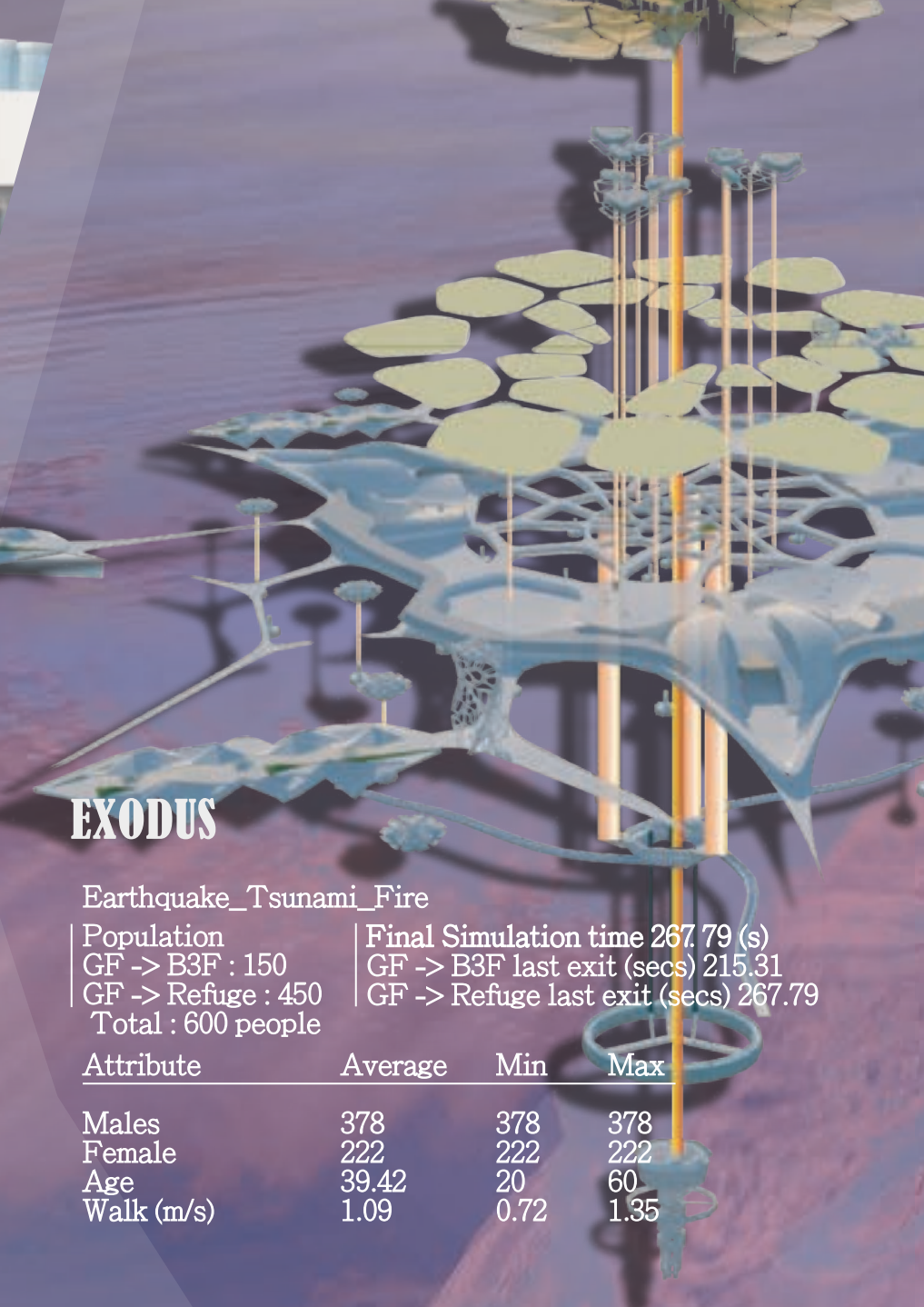
AR Composite Bazaars

Around the center of No.33 is a flexible space for the market to provide visitors variety of choices. The AR simulates the tropical atmosphere to enrich visitors' vision and redefine the resort atmosphere of Phuket in the interlaced spaces.

Ocean & Water Cycle

Rainwater Collection Tower

REFUGES
Rainwater
STORAGE
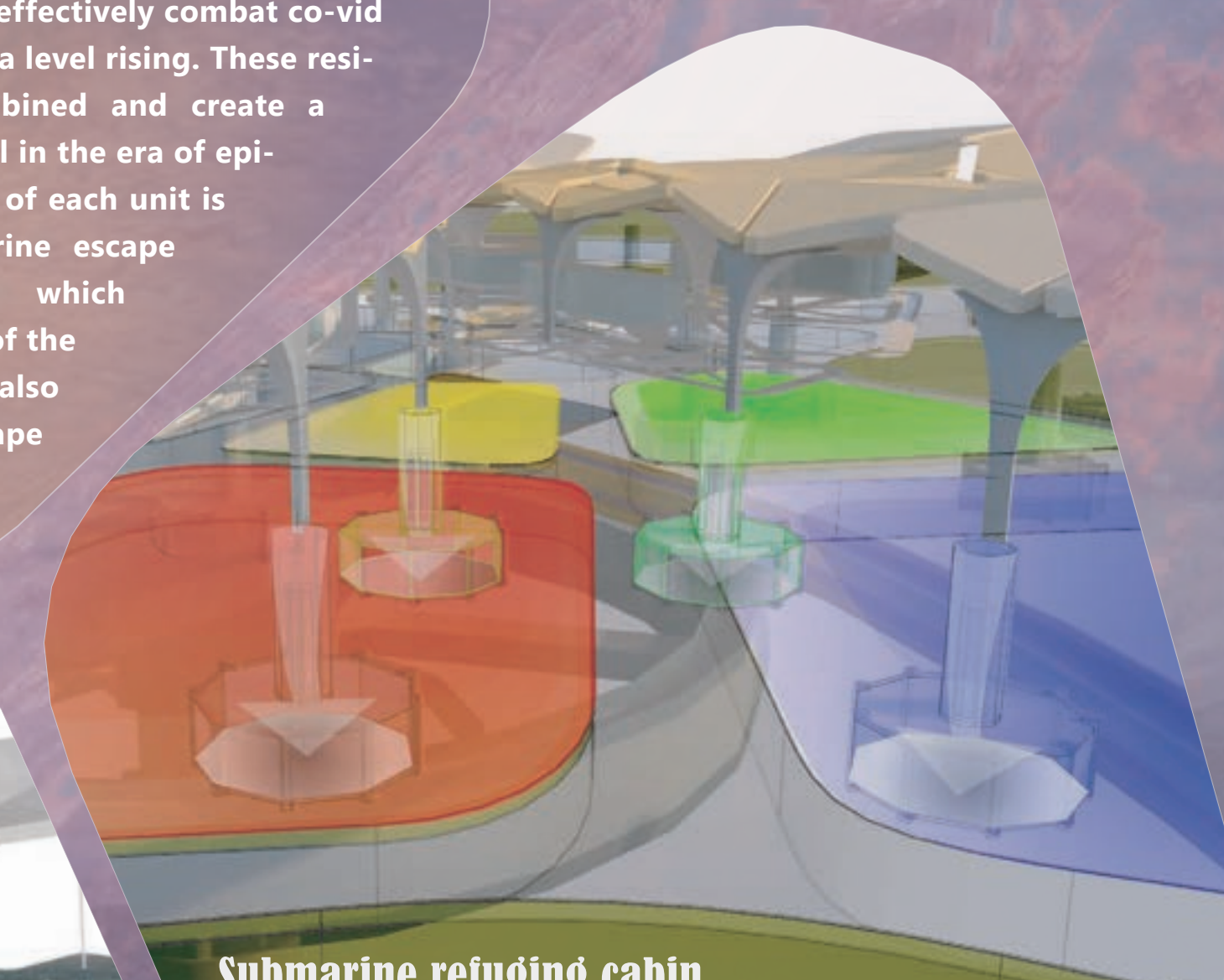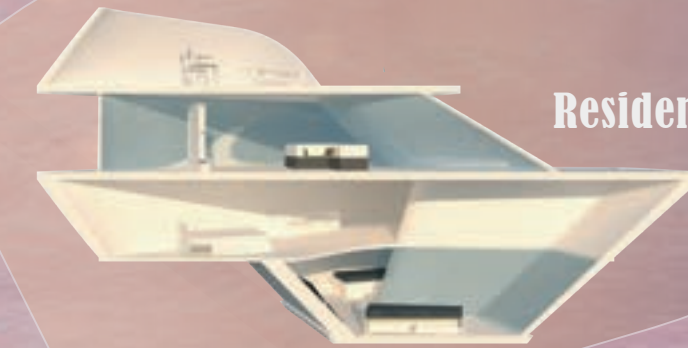EXPOSURE
SEAWATER→PENETRATION→EXCHANGE

Dwelling unit for vacation

Free-assembled Residential Units

Residential units placed on the water effectively combat co-vid 19, global warming, tsunamis and sea level rising. These residential units can be freely combined and create a brand-new accommodation model in the era of epidemics. In addition, the bottom of each unit is connected with a submarine escape evacuation channel, which reduces the spread of the epidemic and also guarantees the escape space.

Residential Units

EXODUS

Earthquake_Tsunami_Fire

Population		Final Simulation time 267.79 (s)
GF -> B3F : 150		GF -> B3F last exit (secs) 215.31
GF -> Refuge : 450		GF -> Refuge last exit (secs) 267.79
Total : 600 people		

Attribute	Average	Min	Max
Males	378	378	378
Female	222	222	222
Age	39.42	20	60
Walk (m/s)	1.09	0.72	1.35

Flooded island

Population		Final Simulation time 325.74 (s)
Total : 600 people		GF -> B2F last exit (secs) 325.74

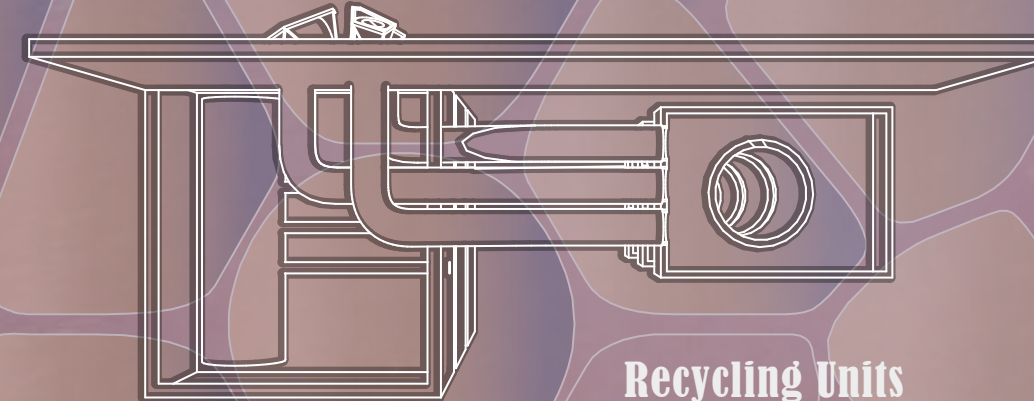| Attribute	Average	Min	Max
Males	600	600	600
Female	0	0	0
Age	39.9	20	60
Walk (m/s)	1.22	1.08	1.35

Submarine refuging cabin

In order to prevent casualties caused by the 2004 South Asian tsunami, the island is divided into multiple regions. Basing on the Voronoi diagram concept, it provides the shortest distance from each area to the escape entrance, making more chances for people to survive.

AI Recycling System

Rainwater Collection Petals

The water circulation network controlled by the cloud central system provides a stable water source. The microbial purification pond ensures water recovery rate and wastewater treatment. By doing so, the policy of protecting marine ecology can be efficiently implemented.

Undergrounded Vacuum Recycling

By the undergrounded AI recycling system, it is possible to achieve the goal of garbage automatic recycling, which classifies into different colors through the vacuum tube. In this way, the garbage problem caused by excessive tourists in Phuket can be solved.

Recycling Units